



Optimize terminal operations
and commercial activity

TerminalManager™
Emerson's next-generation software platform
for management of terminal operations and commercial activity



You are experiencing increasing challenges to meet customer demands and maximize terminal throughput

To meet customer and market requirements, terminals need a robust operations management solution to manage, organize, coordinate, and control the people, equipment, technology, information, and other resources to move product into, within, and out of the terminal. Without the optimal use of information and assets, terminals either don't reach their potential or fail. In a terminal market, complexity increases as a greater number of products are managed and services are provided. Efficiently maximizing the throughput of your terminal assets is critical to remain competitive and profitable.

Delayed shipment and receiving can result into demurrage of \$5K - \$50K per day



Inaccurate measurements and additional costs to verify and calibrate can result to loss of 1 FTE at \$75K per year



Frequent scheduling delays can lead to loss of both customer and tank leases



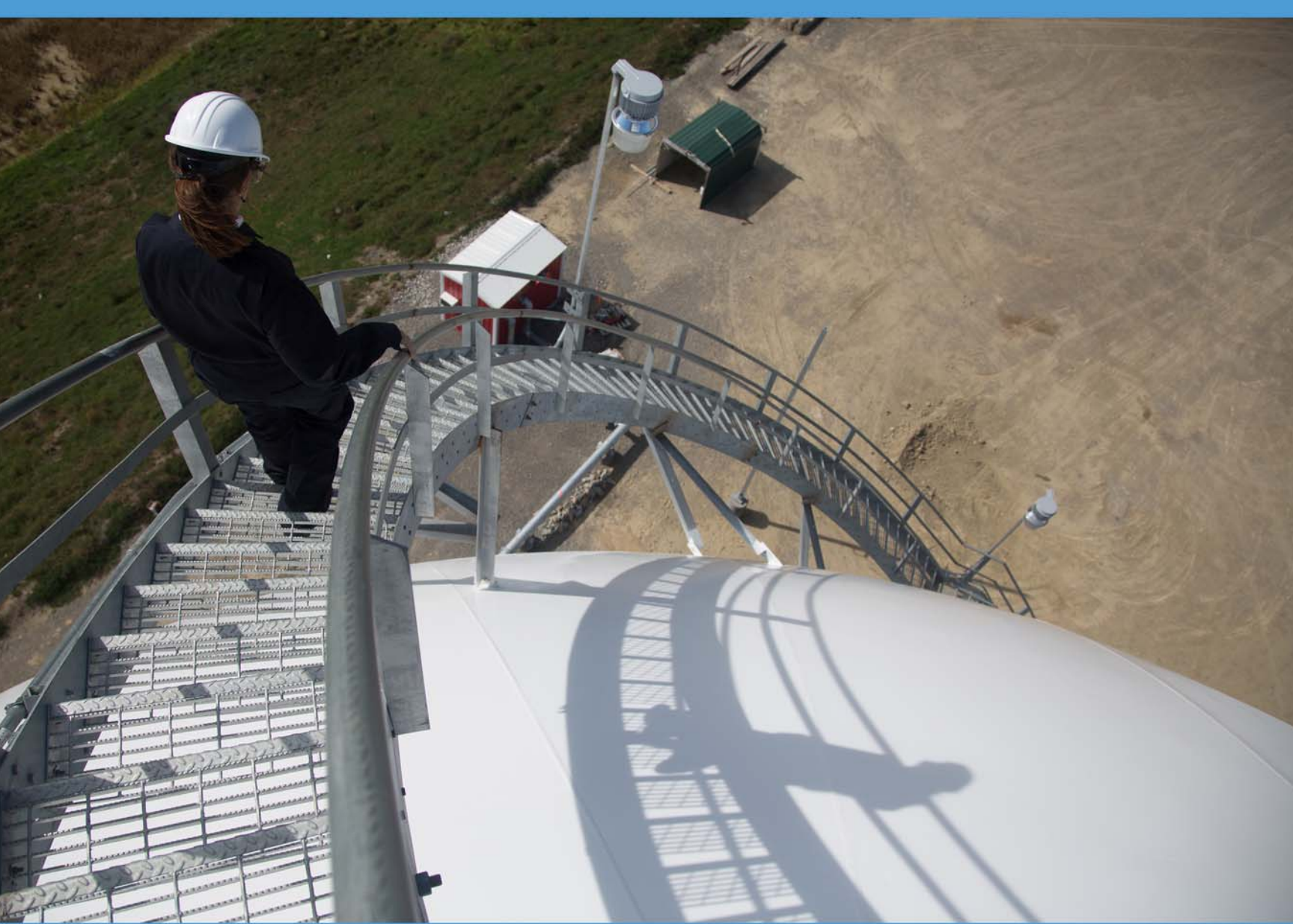


Instead of dealing with frequent delays and a lack of critical information, what if you could achieve greater visibility to terminal activity, enhance customer communications, and streamline operations to safely maximize terminal throughput?

TerminalManager streamlines terminal operations and commercial activity in a single software platform



TerminalManager is Emerson's next-generation software product for managing all terminal, operational, and commercial activity. TerminalManager provides terminal operators with the ability to manage and optimize loading and unloading operations for truck, rail, and barge, and provides complete order-to-cash commercial management to execute contracts and orders, manage inventory, produce invoices, and perform measurement accounting of liquid hydrocarbons.



Total visibility to all aspects of terminal management

TerminalManager provides a single source of data for real-time load-rack visibility, scheduling, inventory, and stock transactions – and ends the search for lost records and accurate inventory while managing stock reconciliation in a single application platform.

Streamline loading and unloading operations

Management of all aspects of production transfers and material movements for truck, railcar, and barge loading/unloading.

Achieve greater connectivity to customer requirements

TerminalManager provides greater connectivity to customer needs, including a web portal to manage contracts, allocations, charges, pricing, and invoicing for all product movements within a terminal.

Close the books faster

TerminalManager is tailored to handle all order-to-cash activities for storage and distribution of materials including material movements within the terminal, ensuring timely and accurate transactional data.

TerminalManager — your solution to maximize the efficiency, productivity, and profitability of your terminal operation

Customer Management

Customers are in need of a single-point solution to manage their terminal operations and provide real-time data for all their terminal-related activities that would result into accurate billing and invoicing. Wouldn't it be nice if there was a customer portal available to manage their allocation and inventory remotely?

TerminalManager is your answer. The customer portal makes all customer-related data available at all times.

Billing & Invoicing

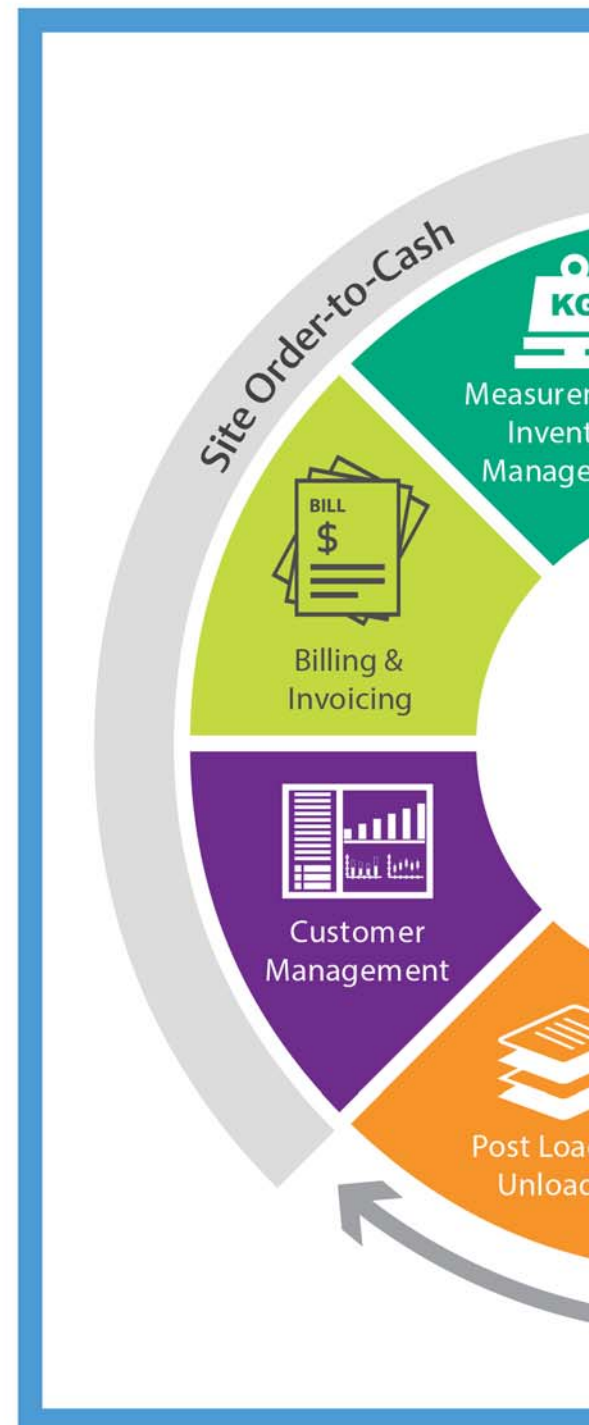
Based on contractual agreement, all customer-related activities need to be captured for billing or reporting purposes.

TerminalManager provides the facility to enter all activities as charges for billing or reporting purposes. Product can be priced by UOM and per customer and invoiced according to product moved.

Inventory Management

Managing inventory accurately is a prime customer concern. Inventory balancing and reconciling book stock against physical stock and re-adjustment before close-out is a recurring need. Managing gain/loss across inventory requires flexibility.

TerminalManager has all the tools to manage and report inventory accurately.



Planning and Scheduling

Trip efficiency and maximum use of terminal assets is important for best-in-class terminal operations. Planning ahead of truck arrivals and movements helps in-terminal traffic congestion and prevents any safety breaches. Scheduling and prioritizing gantry usage guarantees gantry and product availability.

TerminalManager has tools to both plan ahead and schedule gantries on arrival.



Order Management

Customer Registration
Purchase Order Entry
Movement Order Entry
Pre-Registration of Driver / Vehicle

On Site Preparation

Site Access Procedure
Pre-Weighing

Post Loading / Unloading

Post Weighing
Issue Documents
Departure Procedure

Billing & Invoicing

Multiple Charge Types
Invoice Generation

Planning & Scheduling

Timeslot Definition
Slot Booking

Loading / Unloading

Pre-Authorization Line-up
Ground / Overfit Protection
Gantry Batch Control Disconnect

Customer Management

Customer Portal
Contract Management Allocation
Expanded Order Types

Measurement & Inventory Management

Terminal Inventory Management
Bulk Movements

Facility Access Management

Entry and exit of trucks needs to be safe and secure. Security includes driver validation, truck and carrier validation, stock validation and availability, customer allocation, and reporting.

TerminalManager secures terminal access by validating drivers and trucks before granting entry.

Loading/Unloading

Once a truck/railcar is at the gantry, it is important that all controls are validated and in place before a movement is authorized. Knowing the proper amount to load avoids overfill, and knowing what was previously in the compartment avoids contamination. Robust communications with batch controllers provide real-time knowledge of batches in execution that enables appropriate action when alarms occur.

TerminalManager does just that.



Total visibility to all aspects of terminal management

When operations or commercial personnel do not have visibility into real-time terminal data, activities, and inventory, they must put effort into gathering that information. Collecting and aggregating information from the islands of automation that are often mixed with manual data recording can be fraught with errors and losses to transactional records. EEmerson's TerminalManager provides a single source of data for inventory and stock transactions and ends the search for lost records and accurate inventory – while managing stock reconciliation in a single application platform.



What's your challenge?

A customer has poor scheduling due to lack of visibility into their processes and assets.



What's your opportunity?

Reduce the delays that impact terminal throughput by improving real-time load-rack visibility, scheduling, and asset management.

Single application for complete visibility



Single Data Source - Supports generation of master data that is positioned to integrate with an enterprise architecture for multi-terminal access through a centralized server.

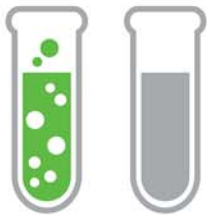


Operations Management - A total view and control of activities inside a terminal. Validation of movements, moving materials safely and securely.



Commercial Management - Order-to-cash functionality including contracts and material allocations, charges to be accounted and billed along with invoices.

Manage product movements and loading/unloading operations



Blending & Additization - Supports sequential and ratio blending at the gantry, ethanol blending, and one or many injected additives.



Co-mingled stock - Tanks are either dedicated to a customer or shared with other customers. Stock in a tank can have multiple owners. TerminalManager supports joint ownership of stock and all movements are pulled in and out of the designated tank stock.



Regulatory Compliance - TerminalManager can be configured to meet regulatory compliance associated with validation information.

Rely on scalable, integrated solutions from Emerson

DELTA V™
OpenEnterprise™

Integration to DeltaV™ - Terminal solution supports connectivity to DeltaV and OpenEnterprise SCADA using OPC. For movements of chemicals and other material that does not require custody measurement, DeltaV and OpenEnterprise SCADA can be your preset controller options.

TankMaster

Integration to TankMaster - Terminal solution supports connectivity to TankMaster using OPC. TankMaster captures all tank information from RTG via FCU. All tank information including alarms can be viewed in TerminalManager.

Synthesis®

Integration to Synthesis® - TerminalManager is designed to connect to Enterprise Synthesis and support multiple terminals via a single centralized system.

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Streamline loading and unloading operations

Without real-time load rack visibility, scheduling and managing assets can be time-consuming and cause delays that impacts terminal throughput. TerminalManager gathers and consolidates real-time data and delivers the data to personnel within the terminal to identify constraints before they happen. Terminal personnel can easily perform scheduling and slot booking to prevent crowding, minimize back-ups, and prevent delays. By optimizing gantry use, risk is reduced because customers have confidence in the products being loaded and delivered on time.

What's your challenge?



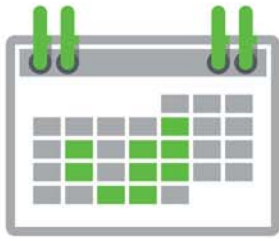
You need to accurately measure and collect transactional data in real time across the enterprise.

What's your opportunity?



TerminalManager connected to the DL8000 preset controllers leverages a single system to manage month-end inventory and transaction reconciliation, losses, gains, and customer invoicing.

Effectively plan and schedule terminal loading/unloading activity



Time Slot Booking - Planning is essential to guarantee on-time delivery. TerminalManager provides a slot booking tool that allows booking of truck arrivals by the hour, avoiding delays at the terminal.

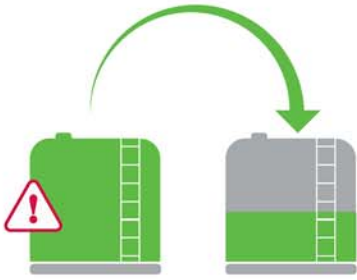


Bay Queueing - On truck arrivals, TerminalManager automatically assigns the optimal bay and informs the driver where to go. This avoids traffic congestion at bay.



Terminal Capacity - Terminals have limited space and truck volume needs to be controlled. TerminalManager keeps track of the number of trucks at any given time without exceeding capacity. Truck return time is controllable as well.

Manage on-site safety and security



Overflow Prevention - The goal of all operators is to have incident-free operation. TerminalManager keeps track of any material on board and knows exactly how much can be filled in compartments to prevent overflow.

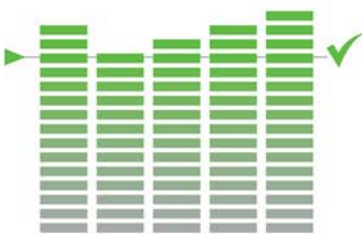


Contamination Control - TerminalManager remembers which material in a compartment was last stored and prevents mixing of different material types to prevent contamination.



Access Control - TerminalManager supports automated entry and exit into a terminal site. Access can be secured by proximity cards, keypad and display panels, biometric scanners, and RFID identification of vehicles.

Optimize gantry utilization



Asset Utilization - Use all the terminal assets, such as pumps, meters, valves and gantries. TerminalManager helps achieve maximum usage by keeping track of all activities and utilization that provides operators valuable information to optimize movements.



Limit Downtime - TerminalManager provides a robust solution that minimize manual operations and avoids re-work.



Accurate Accounting - TerminalManager accurately accounts for compartment capacity and material grades. Truck weights are managed to avoid exceeding maximum allowable transport weights. Any re-work is eliminated.



Achieve greater connectivity to customer requirements

Customers want results. They also want confidence in your operations during the transaction process. Communicating with customers requires accurate and timely information otherwise you might lose their confidence and financial opportunities. TerminalManager aggregates information real-time and provides a customer portal to manage orders and inventory positions. In addition, automatically scheduled reports and notifications provide the required information to whom and when it is needed, resulting in complete visibility to terminal activities -- whether it is a barge arrival or a truck loaded and leaving the facility.



What's your challenge?

You lack available data that meets customer expectations and requirements.



What's your opportunity?

Automatically notify customers of terminal activities, gain enterprise-wide data visibility, and improve forecasts with prediction modeling.

Visibility and information when it's needed



Customer Portal - Allows customer to view and manage their allocations and stock at any given time. The customer portal allows customers to create and schedule all their product movements.



Easy Access - Having visibility of all activities at the terminal enables customers to manage their accounts and terminal operators to better manage assets and overall operations.



Personas - TerminalManger helps create a persona for each user. Default personas include drivers, service techs, surveyors, control room operator, supervisor, and terminal operator. Customers can add more as needed.

Automatic notification of terminal activities



Email - All reports can be configured to send via email to one or many customer employees. Data is secured and can be and can be displayed in a variety of standard formats.



Driver Performance - All events are time-stamped and archived. Driver performance can be measured and reported to carrier and customer.



Trip Duration - Trip delays can be caused by issues with the driver, vehicle, validation, and several other reasons. TerminalManger provides information to customers, enabling them to rectify delays and avoid any surcharges or revenue losses.

Eliminating customer disputes



Documentation - All events are documented. Reporting audit trail of all events are archived for any further analysis. This helps avoid any customer disputes.



Reporting - Real-time reporting gives customers information about their related activities. Allocations are monitored and reported, allowing customers to plan ahead.



Data Management - All data is archived and available to the customer. Daily, weekly, monthly, annual, and YTD transactional data are available at all times. Pricing and charges are available for accurate invoicing.



Close the books faster

One of the key challenges when closing out accounting periods is the availability of data for activities that occurred during the period. Product receipts, deliveries, and services are frequently documented using manual methods and it can be hard to ensure that all the data is correct and available. With TerminalManager, you will have a single application for visibility to contracts, orders, and inventory, making reconciling loss gains and closing out the period faster and error free. You and your customers will now have the confidence and the ability to focus on maximizing the overall efficiency of the operation instead of searching for missing data.



What's your challenge?

There is a lack of current and accurate transactional data needed to close the books in a timely manner.



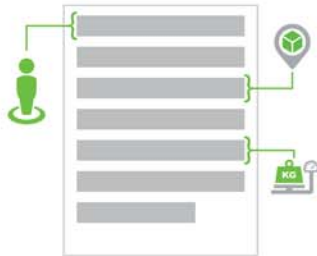
What's your opportunity?

With Emerson's TerminalManager, you will have complete visibility of product receipts, deliveries, and inventory transactions as they occur, with data collected in real time.

Manage Contracts



Contract Terms - Includes the ability to identify the contract party, the mode of transport, drop locations, load/delivery windows, Import duties, commissions, payment terms, and general terms.



Contract Segments - Includes the ability to identify multiple records per contract, including product grade, location, pricing formulas, quantity, product specifications, and credit releases



Contract Charges - For storage and transportation contracts includes all details associated with charges for storing or transporting volumes.

Complete Measurement and Inventory Management



Book and Physical Inventory - Management of all book inventory positions, consisting of opening book inventory, receipts, deliveries, loadings, transfers, adjustments, over/shorts, and closing (total) volumes, as well as total visibility of physical positions.



Inventory Reconciliation - If the physical and book inventories are different, reconcile the difference between the two by adjusting the book inventory.



Measurement Management - Complete capability to manage and correct measurement data fully compliant to API standards, calculate and recalculate net volumes, and generate meter factors using pipe proving runs to calculate corrections.

Integrated Billing and Invoicing



Transportation and Storage Charges - Create charges for transportation, storage and other services that logistics providers encounter. This includes charges for additives, handling of product, activities such as transfers, heating and blending and approximately 150 other logistics specific charges.



Invoicing - Automatically generate invoices which customers can view through the online portal.



ERP Integration - Configurable integration to customer ERP systems supports seamless reporting of business transactions to the enterprise.

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Remote Automation Solutions



Global Headquarters
North America and Latin America
Emerson Process Management
Remote Automation Solutions
6005 Rogerdale Road
Houston, TX, USA 77072
T +1 281 879 2699
F +1 281 988 4445

www.Emerson.com



Europe
Emerson Process Management
Remote Automation Solutions
Unit 8, Waterfront Business Park
Dudley Road, Brierley Hill
Dudley, UK DY5 1LX
T +44 1384 487200
F +44 1384 487258



Middle East and Africa
Emerson Process Management
Remote Automation Solutions
Emerson FZE
PO Box 17033
Jebel Ali Free Zone - South 2
Dubai, UAE
T +971 4 8118100
F +1 281 988 4445



Asia Pacific
Emerson Process Management
Remote Automation Solutions
3A International Business Park
#11-10/18, Icon@IBP, Tower B
Singapore 609935
T +65 6777 8211
F +65 6777 0947

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D352509X012 / Printed in USA / 01-17



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