

## Features

- Intel® Pentium® M up to 1.8 GHz
- Up to 1 GB DDR SDRAM ECC soldered
- Two Gigabit Ethernet ports
- Four USB 2.0 ports
- Two SerialATA channels
- PC/104 and PC/104-Plus modules support
- Protective coating (optional)
- 50G/5G – shock/vibration resistance
- Operating temperature: –40°C to +70°C
- IP52 Sealed
- Fanless design

## Overview

Fastwel TK-8000 is a highly integrated industrial computer designed to work in harsh environment either as human-operated or unattended system at remote location. Industrial automation, transport as well as defense and security are among the major application areas of Fastwel TK-8000.

Having inside Pentium M 1.8 GHz CPU with 2 MB level 2 cache, up to 1 GB DDR SDRAM with ECC and embedded Graphics Engine with VGA output up to 2048×1536 @ 75 Hz, Fastwel TK-8000 is capable to perform major computing and visualization tasks in industrial applications within extended temperature range from –40°C to +70°C.

Modern board architecture and robust mechanical design ensure capability of Fastwel TK-8000 to withstand up to 50G shock, up to 5G vibration and up to 95% humidity level without operability loss. All electronic components including CPU, SDRAM memory, and 32 MB flash memory are soldered on board. TK-8000 is equipped with conduction cooling system for effective heat sinking from CPU and other critical components to the all-metal housing of Fastwel TK-8000.

Two Gigabit Ethernet channels provide Fastwel TK-8000 with high speed communication links important for fast data exchange with server or storage facility, for working in Remote Desktops operation mode or any other bandwidth-hungry applications. Two RS-232 ports, two RS-485 ports, four USB 2.0 ports and one LPT port provide connectivity to peripheral devices.

Fastwel TK-8000 can be ordered with CF or SSD installed having either IDE or SATA interfaces. BIOS of Fastwel TK-8000 can be configured for booting from onboard flash, CF storage or via LAN and USB.

Fastwel TK-8000 supports wide range of real time (QNX, VxWorks, WinCE) and non-real time (Windows XP/XP Embedded and Linux) operating systems. Fastwel TK-8000 requires external 9-30V DC power supply.

## Technical Specifications

### System

- Intel Pentium M processor 1.8 GHz
- 400 MHz processor system bus
- Up to 1 GB DDR SDRAM with ECC onboard

### BIOS

- Phoenix® BIOS with backup copy
- Reserved CMOS memory
- LAN Boot
- USB Boot
- Multi Boot
- Quick Boot
- ACPI 3.0

### Graphics

- Video controller integrated in 855GME
- 2D/3D built-in accelerator
- Shared video memory up to 96 MB
- Analog displays with resolution up to 2048×1536 @ 75 Hz support

### Storage

- 32 MB solid-state disk soldered onboard
- Socket for CompactFlash™ Type I/II or Microdrive
- Place for 1×SATA HDD/SSD

### Software Support

- Windows® XPE
- Windows® XP Pro
- Windows® CE 5.0
- VxWorks®
- Linux®
- QNX®

### Interfaces

- Two Gigabit Ethernet ports via RJ-45 connectors
- PC/104 and PC/104-Plus modules support
- One LPT port
- Two EIDE Ultra ATA/100 Interfaces

- Two SerialATA channels
- Four USB 2.0 ports
- Four COM ports:
  - 2×RS-232 ports
  - 2×RS-485 ports
- Line-in, Line-out, Mic-in
- DB-15 VGA connector
- Power ON/OFF switch
- Power LED, HDD LED

### Mechanical

- Dimensions:
  - with wall-mount rails 238×209×82.38 mm
  - without wall-mount rails 212×209×64.38 mm
- Weight: 3.3 kg (7.33 lb)
- Rugged aluminum alloy chassis

### Power Requirements

- ATX/AT power function
- DC input 9-30V (3-pin phoenix connector)
- Optional AC power adapter, input voltage range 100 to 240 V

### Environmental Conditions

- Operating temperature: –40°C to +70°C, CF or SSD
- Shock: 50G peak acceleration (11 ms duration), CF or SSD
- Vibration: 5G RMS (5...500 Hz) operation, CF or SSD
- Storage humidity: 5 to 95% RH, non-condensing
- EMC: CE/FCC Class A

### Warranty

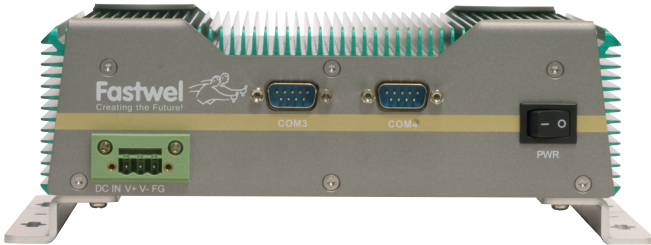
- 3 years for parts and labor

### List of Deliverables

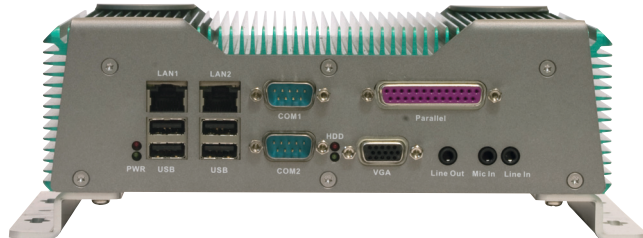
- TK-8000 Controller – 1 item
- Phoenix power connector – 1 item
- Wallmount Brackets – 2 items
- Screw Package – 1 item
- CD with drivers and documentation

## BoxPC Layout

Front panel view



Back panel view



## Ordering Information

### TK-8000 Configuration

#### TK-8000 - 02 - P1.8 - RAM1024 - I \Options

##### Device Type

TK-8000 BoxPC, Pentium® M, DDR SDRAM soldered, FFD 32MB, SVGA, 2xGigabit LAN

##### Processor

C1.0 Celeron M 1.0 GHz, LV, 400 MHz FSB  
 P1.4 Pentium M 1.4 GHz, 400 MHz FSB  
 P1.8 Pentium M 1.8 GHz, 400 MHz FSB

##### Soldered Memory

RAM512 512 MB soldered DDR SDRAM ECC  
 RAM1024 1024 MB soldered DDR SDRAM ECC

##### Options

\xxx Choose available options from the table

### TK-8000 Available Options

Compact Flash Module	
\CF1024	1024 MB Compact Flash, industrial
\CF2G	2 GB Compact Flash, industrial
\CF4G	4 GB Compact Flash, industrial
\CF8G	8 GB Compact Flash, industrial
\CF16G	16 GB Compact Flash, industrial
Disk Drive 2.5" Installed	
\HDDxx	Hard Disk Drive 2.5" xx GB
\SSDxx	Solid State Drive 2.5" xx GB
Coating	
\COATED	Protective coating
Operating System Presetting	
\XPP	Windows XP Pro
\XPE	Windows XP Embedded
\QNX	QNX 6.0, 4.25
\WCE	Windows CE
\LNX	Linux 2.4.20, 2.6.11
\VXW	VxWorks

Other configurations and options are available upon request.

#### Example

**TK-8000-02-P1.8-RAM1024-I\CF2G\HDD120\COATED\XPE**  
 BoxPC, Pentium® M SBC, DDR, FFD 32MB, SVGA, 2xGigabit LAN  
 Pentium M 1.8 GHz, 400 MHz FSB  
 1024 MB soldered DDR SDRAM  
 Industrial temperature range, -40...+70°C  
 2GB Compact Flash  
 Hard Disk Drive 2.5" 120 GB  
 Protective coating  
 Windows XP Embedded

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Product specifications are subject to change without notice

## Corporate Offices

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