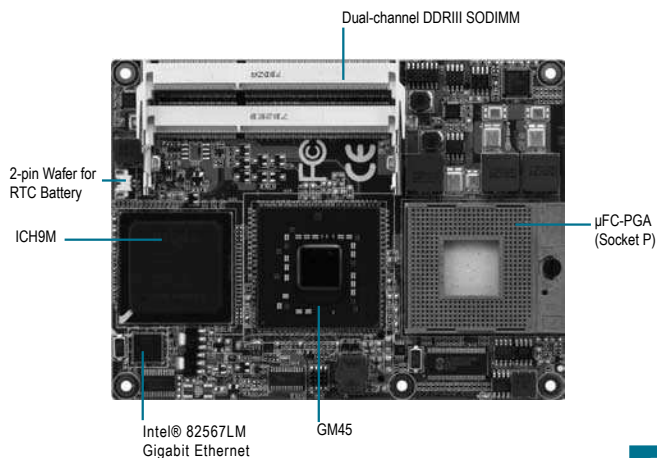


# COM-45SP

## COM Express CPU Module with Intel® Core™ 2 Duo/ Celeron® M (Socket-P Based) Processors

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COM Express CPU Modules



### Features

- Intel® Core™ 2 Duo/ Celeron® M (Socket-P Based) Processors
- Intel® GM45 + ICH9M
- Dual-channel DDRIII 800/1066 Memory, Max. 8GB
- Gigabit Ethernet
- CRT, Up to 24-bit Dual-channel LVDS LCD, TV, Display Port, HDMI, DVI
- High Definition Audio Interface
- SATA II x 4
- USB 2.0 x 8
- PCI x 4, PCI-Express [x16] x 1, PCI-Express [x1] x 5
- Wide DC Input Range, +8.5V to +19V
- COM Express Basic Module Pin-out Type II



### Specifications

System	
Form Factor	COM Express basic module, Pin-out Type II
Processor	Intel® Core™ 2 Duo/ Celeron® M (Socket-P based) processors
System Memory	204-pin DDRIII SODIMM x 2, Max. 8GB (DDRIII 800/1066), supports dual-channel function
Chipset	Intel® GM45 + ICH9M
I/O Chipset	ICH9M
Ethernet	Intel® 82567, 10/100/1000Base-TX
TPM	v1.2
BIOS	Award BIOS v8.0 SPI type, 2MB ROM
EEPROM	Atmel® AT24C02, save BIOS and configuration data
Wake on LAN	Yes
Watchdog Timer	Fintek F75111
H/W Status Monitoring	Supports CPU temperature monitoring
Expansion Interface	PCI-Express [x16] x 1 (Shared with 2 SDVOs/ 3 DisplayPorts/ 2 HDMI/ 2 DVI) =>> Can be configured as PCI-Express [x1]/ [x2]/ [x4]/ [x8] PCI-Express [x1] x 5 32-bit PCI x 4 LPC bus x 1 SMBus x 1 I2C x 1
Power Requirement	Wide DC input range, +8.5V to +19V 2-pin wafer for RTC battery
Power Consumption (Typical)	Intel® T9400 2.53GHz, DDR III 1066 2GB 3.94A@+12V, 0.38A@+5V
Board Size	4.92"(L) x 3.75"(W) (125mm x 95mm)
Gross Weight	0.66 lb (0.3 Kg)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	—
Display	
	Supports CRT/LCD, CRT/TV, CRT/DVI, LCD/TV, LCD/DVI simultaneous/ dual view displays
Chipset	Intel® GM45 integrated Integrates hardware MPEG2 decoder Supports WMV9 (VC-1) and H.264 (AVC)
Memory	Shared system memory above 512MB/ DVMT 5.0
Resolution	Up to 2048 x 1536 (QXGA) for CRT Up to 2048 x 1536 (QXGA) for LCD
LCD Interface	Up to 24-bit dual-channel LVDS
SDVO	Supports SDVO x 2 (Shared with PCI-Express [x16])
HDMI	Supports HDMI x 2 (Shared with PCI-Express [x16], needs to add a level shifter)
DVI	Supports DVI x 2 (Shared with PCI-Express [x16], needs to add a level shifter)
DisplayPort	Supports DisplayPort x 3 (Shared with PCI Express [x16])
TV-out	Intel® GM45 integrated, supports NTSC/ PAL/ HDTV HDTV support: 480p/720p/1080i/1080p Supports Composite Video, S-Video, Component Video (YPbPr) on carrier board

I/O	
Storage	SATA II x 4
USB	USB 2.0 x 8
Audio	High definition audio
GPIO	Up to 4 in or 4 out

### Packing list

- M2.5 Screw x 5
- Utility CD
- COM-45SP

### Ordering Information

- **TF-COM-45SP-A10**  
COM Express CPU Module, Socket P, Dual DDRIII, Gigabit Ethernet, USB2.0, Rev.A1.0

### Optional Accessories

- **TF-ECB-916M-A10-01**  
COM Express Carrier Board, microATX, Dual Gigabit Ethernet, 7.1CH Audio, 4COM, USB, PCI-Express, AT/ATX, Rev.A1.0
- **TF-PER-A051**  
CPU Cooler, Socket-type CPU, 12V Fan
- **TF-PER-A052**  
CPU Cooler, Onboard CPU, 12V Fan