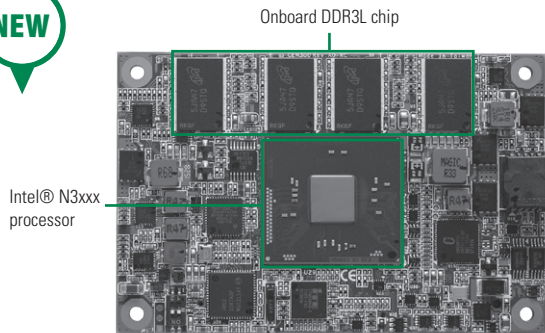


CEM300

Intel® Pentium® & Celeron® N3000 Series Processors COM Express Type 10 Mini Module



System

CPU	Intel® Pentium® & Celeron® N3000 series (Braswell) processors, N3700 1.6 GHz quad core, N3150 1.6 GHz quad core and N3050 1.6 GHz dual core onboard
System Memory	On-board DDR3L chips up to 8 GB
Chipset	SoC integrated
BIOS	AMI uEFI
SSD	N/A
Watchdog Timer	255 levels, 1~255 sec. or min.
Expansion Interface	4 x PCIe lanes (3 lanes while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: 4.75V~20V, +5VSB AT: 4.75V~20V
Size	84 x 55 mm
Board Thickness	2.0 mm
Temperature	-20°C ~ +70°C (-4°F ~ 158°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x LPC interface 1 x SPI interface 2 x Serial TX/RX
SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 port as 10/100/1000Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i211AT
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.0 and 8 x USB 2.0
TPM	N/A
SMBus	Yes
Digital I/O	4 channels IN & 4 channels OUT
Smart Battery	Yes

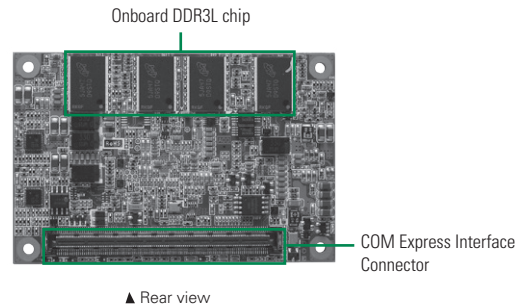
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Череповец (8202)49-02-64
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- Intel® Pentium®/Celeron® N3000 series Quad/Dual core processors (Braswell)
- Max. up to 8 GB DDR3L on-board memory
- Max. up to 4 lanes of PCI Express
- 2 SATA-600
- 2 USB 3.0 and 8 USB 2.0



Display

Chipset	Intel® Gen 8 Graphics Engine Supports Gfx - DX11.1, OCL1.2, OGL 4.2
Display Interface	1 x DDI (DP, HDMI, DVI) 1 x LVDS; 18/24-bit single channel (eDP option)

Packing List

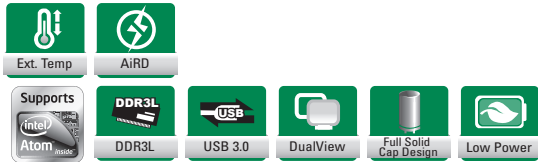
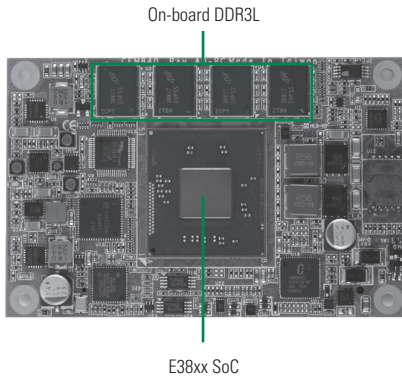
Quick installation guide

Ordering Information

Standard	
CEM300PG-N3700-4G	COM Express type 10 mini module with Intel® Pentium® N3700, 4 GB, DP/LVDS, USB 3.0 and 10/100/1000Mbps Ethernet
CEM300PG-N3150-4G	COM Express type 10 mini module with Intel® Celeron® N3150, 4 GB, DP/LVDS, USB 3.0 and 10/100/1000Mbps Ethernet
CEM300PG-N3050-4G	COM Express type 10 mini module with Intel® Celeron® N3050, 4 GB, DP/LVDS, USB 3.0 and 10/100/1000Mbps Ethernet

CEM840

Intel® Atom™ E3800 Family COM Express Type 10 Mini Module



System

CPU	Intel® Atom™ processor E3845 1.91 GHz quad core, Atom™ E3827 1.75 GHz dual core, or Atom™ E3815 1.46 GHz single core onboard
System Memory	Onboard extended temperature DDR3L chips up to 4 GB
Chipset	SoC integrated
BIOS	AMI uEFI
SSD	N/A
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	4 x PCIe x1 devices (3 x 1 while internal LAN is connected)
Battery Lithium	N/A
Power Input	DC input: 4.75V ~ 20V or ATX +12V/+5VSB
Size	84 x 55 mm
Board Thickness	2.0 mm
Temperature	-40°C ~ +85°C (-40°F ~ +185°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

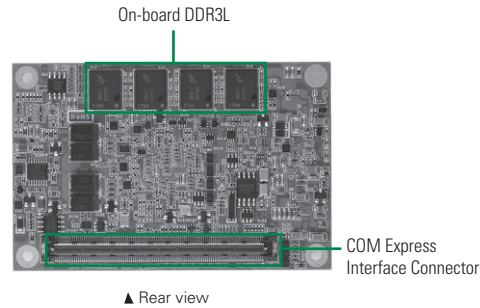
MIO	1 x LPC interface
SATA	2 x SATA-300 support
Hardware Monitoring	Yes
Ethernet	1 port as 10/100/1000Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i210IT
Audio	HD link interface to baseboard for Codec
USB	8 x USB 2.0 and 1 x USB 3.0
TPM	N/A
SMBus	Yes
Digital I/O	4 channels IN & 4 channels OUT

Display

Chipset	Intel® HD graphics (Gen 7 Gfx) display engine Gfx APIs – DX11, OCL 1.2, OGL 3.2 2 independent displays
Display Interface	1 x LVDS; 18/24-bit single channel 1 x DDI (DP, HDMI, DVI)

Features

- Intel® Quad/ Dual/ Single Core Atom™ processor (Bay Trail)
- Max. up to 4 GB DDR3L on-board memory
- Max. up to 4 lanes of PCIe
- 2 SATA-300 interfaces
- 8 USB 2.0 and 1 USB 3.0 ports



Packing List

Quick installation guide, user's manual/utility CD

Ordering Information

Standard

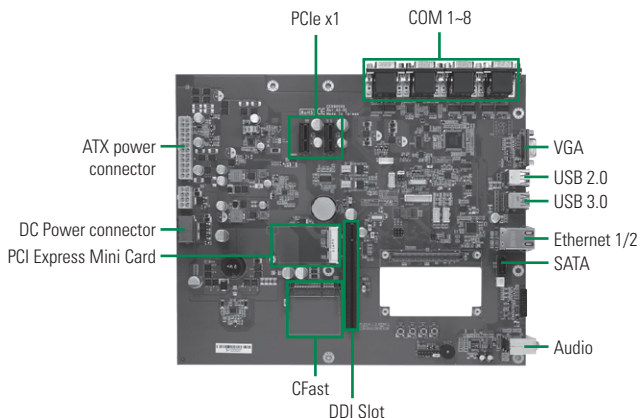
CEM840PG-E3845-4G (P/N:E38D840102)	COM Express type 10 mini module with Intel® Atom™ E3845, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM840PG-E3827-4G (P/N:E38D840100)	COM Express type 10 mini module with Intel® Atom™ E3827, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM840PG-E3815-4G (P/N:E38D840107)	COM Express type 10 mini module with Intel® Atom™ E3815, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM840PG-E3845-2G (P/N:E38D840108)	COM Express type 10 mini module with Intel® Atom™ E3845, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM840PG-E3827-2G (P/N:E38D840106)	COM Express type 10 mini module with Intel® Atom™ E3827, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM840PG-E3815-2G (P/N:E38D840101)	COM Express type 10 mini module with Intel® Atom™ E3815, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0

Optional Accessories

CEM94008 (P/N: E394008100)	ATX form factor type 10 evaluation board
5078D840100E	CEM840 heat spreader
5078D840200E	CEM840 heat sink with fan
5078D840300E	CEM840 heatsink without fan

CEB94008

COM Express Type 10 Development Baseboard



System

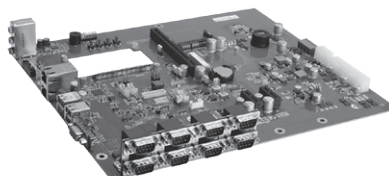
CPU	COM Express type 10 module
System Memory	On the module
Chipset	SoC integrated
BIOS	On the module
SSD	1 x CFast™
Watchdog Timer	On the module
Expansion Interface	2 x PCIe x1 slot 1 x PCI Express Mini Card slot 1 x DDI display card slot
Battery Lithium	Lithium 3V/195mAH
Power Requirements	TBD
Size	244 x 291 mm
Board Thickness	2.0 mm
Temperature	-40°C ~ +85°C (-40°F ~ +185°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	2 x TX/RX UARTs (from CPU module) 2 x RS-232/422/485 4 x RS-232
SATA	1 x SATA connector
Hardware Monitoring	N/A
Ethernet	1 port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i210 1 RJ-45 which 10/100/1000 Mbps signals routed from CPU module
Audio	HD audio with Line-in/Line-out/MIC-in
USB	8 x USB 2.0 ports and 2 x USB 3.0 ports
Port 80 Display	Dual 7 segments port 80 display for convenient debugging purpose through LPC interface
SMBus	Yes
Digital I/O	8 Channels (4-IN & 4-OUT)
Display	1 x LVDS 18/24-bit single channel 1 x VGA 1 x DDI display slot

Features

- COM Express type 10 baseboard
- One SATA-300 and CFast™
- One PCI Express Mini Card slot
- USB 3.0 supported
- Port 80 display for debugging



▲ Side view

Packing List

Quick installation guide, user's manual/utility CD

Ordering Information

Standard

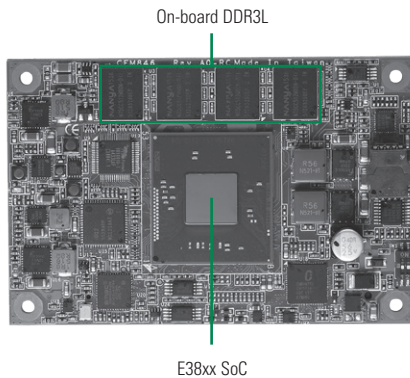
CEB94008 (P/N:E394008100)	COM Express type 10 evaluation baseboard with PCI Express Mini Card, 2 GbE LANs, LVDS/VGA and multiple I/O features
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Compliant Modules

CEM840	COM Express type 10 mini module with Intel® E3845/E3827/E3815, 4 GB/2 GB, DP/LVDS, 10/100/1000 Mbps Ethernet and USB 3.0
CEM846	COM Express type 10 mini module with Intel® E3845/E3827/E3815, 4 GB/2 GB, DP/LVDS, 10/100/1000 Mbps Ethernet and USB 3.0
CEM300	COM Express type 10 mini module with Intel® N3710/N3160/N3060, 4 GB/8 GB, DP/LVDS, 10/100/1000 Mbps Ethernet and USB 3.0

CEM846

Intel® Atom™ E3800 Family COM Express Type 10 Mini Module



System

CPU	Intel® Atom™ processor E3845 1.91 GHz quad core, Atom™ E3827 1.75 GHz dual core, or Atom™ E3815 1.46 GHz single core onboard
System Memory	Onboard extended temperature DDR3L chips up to 4 GB
Chipset	SoC integrated
BIOS	AMI uEFI
SSD	N/A
Watchdog Timer	255 levels, 1~255 sec.
Expansion Interface	4 x PCIe x1 devices (3 x 1 while internal LAN is connected)
Battery Lithium	N/A
Power Input	DC input: 4.75V ~ 20V or ATX 4.75V~20V/+5VSB
Size	84 x 55 mm
Board Thickness	2.0 mm
Temperature	-40°C ~ +85°C (-40°F ~ +185°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

I/O

MIO	1 x LPC interface 2 x Serial TX/RX
SATA	2 x SATA-300 support
Hardware Monitoring	Yes
Ethernet	1 port as 10/100/1000Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i210IT
Audio	HD link interface to baseboard for Codec
USB	8 x USB 2.0 and 1 x USB 3.0
TPM	N/A
SMBus	Yes
Digital I/O	4 channels IN & 4 channels OUT

Display

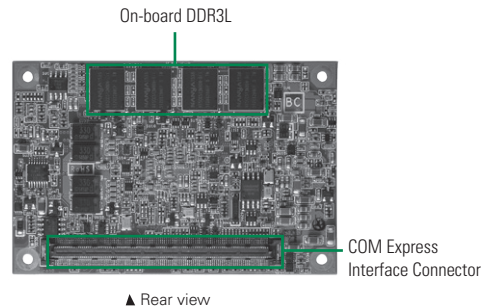
Chipset	Intel® HD graphics (Gen 7 Gfx) display engine Gfx APIs – DX11, OCL 1.2, OGL 3.2 2 independent displays
Display Interface	1 x LVDS; 18/24-bit single channel 1 x DDI (DP, HDMI, DVI)

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Набережные Челны (8552)20-53-41

Features

- Intel® Quad/ Dual/ Single Core Atom™ processor (Bay Trail)
- Max. up to 4 GB DDR3L onboard memory
- Max. up to 4 lanes of PCIe
- 2 SATA-300 interfaces
- 8 USB 2.0 and 1 USB 3.0



▲ Rear view

Packing List

Quick installation guide, user's manual/utility CD

Ordering Information

Standard	
CEM846PG-E3845-4G	COM Express type 10 mini module with Intel® Atom™ E3845, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM846PG-E3827-4G	COM Express type 10 mini module with Intel® Atom™ E3827, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM846PG-E3815-4G	COM Express type 10 mini module with Intel® Atom™ E3815, 4 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM846PG-E3845-2G	COM Express type 10 mini module with Intel® Atom™ E3845, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM846PG-E3827-2G	COM Express type 10 mini module with Intel® Atom™ E3827, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0
CEM846PG-E3815-2G	COM Express type 10 mini module with Intel® Atom™ E3815, 2 GB, DP/LVDS, 10/100/1000Mbps Ethernet and USB 3.0

Optional Accessories

CEM94008	ATX from factor type 10 evaluation board
(P/N: E394008100)	
5078D840100E	CEM840 heat spreader
5078D840200E	CEM840 heat sink with fan
5078D840300E	CEM840 heatsink without fan

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