GIGAIPC

EL-20-3700-32GB (rev. 2.0)

Intel® Bear Ridge IoT Gateway Solution

Key Features

- Intel® Pentium® N3710 processor
- 2 x SO-DIMM DDR3L slots
- 2 x GbE LAN Ports (Realtek® RTL8111HS)
- 32GB onboard eMMC memory
- 1 x Full-size Mini-PCIe slot for 3G module or mSATA storage
- 1 x SDXC card slot
- Supports Windowsu00ae 7/ 8.1/ 10 and Android 5.1
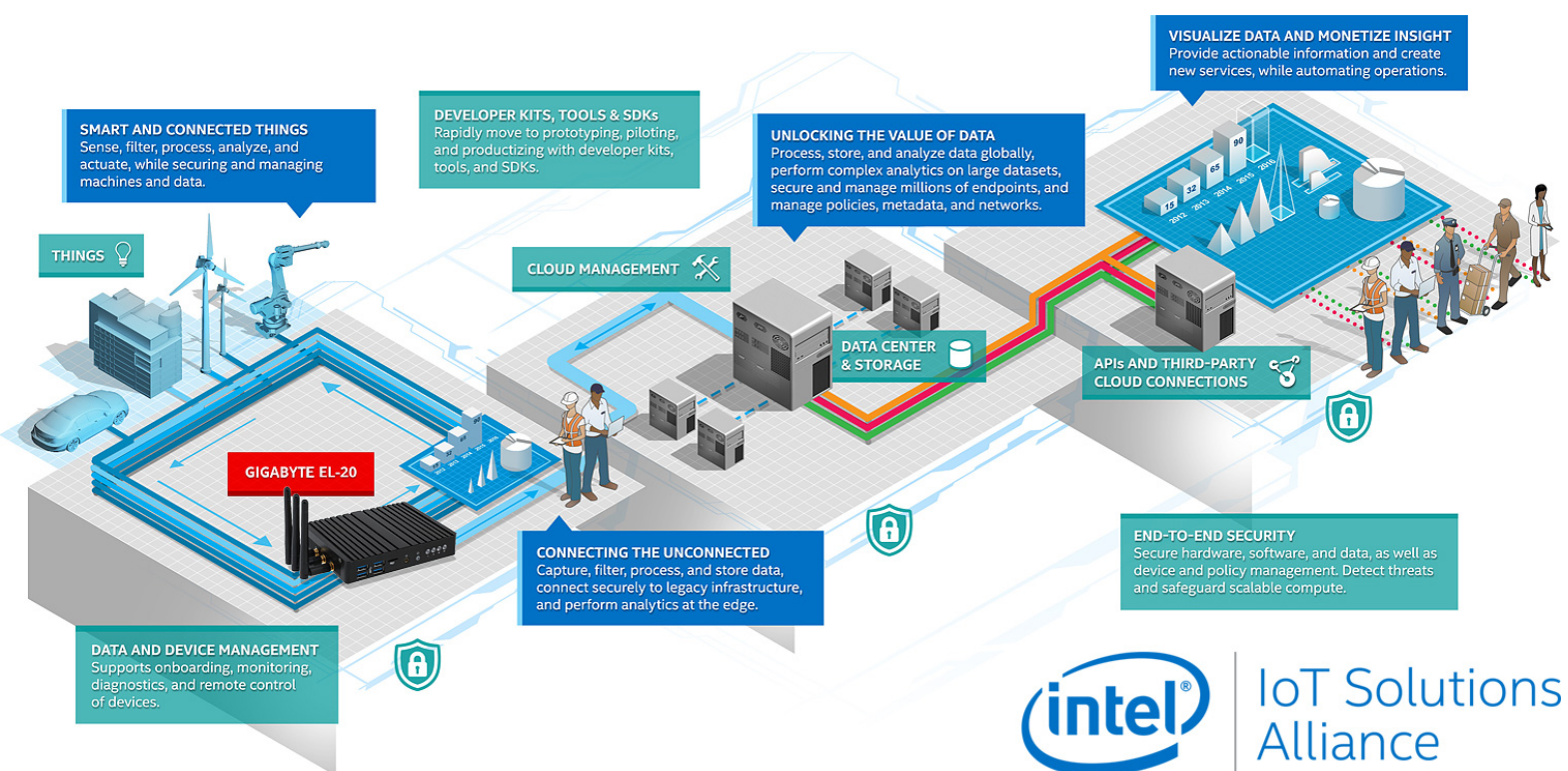
Application

- IoT applications

EL-20 IoT Gateway System Overview

1 x 3G antenna

2 x Wi-Fi antenna

4 x USB 3.2 Gen 1

1 x Micro SD card slot

Headphone-out / Mic-in

1 x HDD LED &
3 x malfunction LED for
customer's configuration

Power button w/ LED

12-19V DC-in

2 x HDMI-out
Max. resolution:
3840x2160@30Hz
2560x1600@60Hz

2 x Gigabit LAN

Simple Devices for the IoT Era

Being an associate member of the Intel IoT Solutions Alliance GIGAIPC (GIGABYTE Group) is at the heart of the booming Internet of Things computing market. We create reference designs for Intel's new platforms, and develop them further into a large range of professional IoT products and customer-optimized solutions.

The EL-20 series is one of those products, developed as the reference design for Intel's Bear Ridge platform. It is a small form factor (SFF) industrial computer with leading performance and security, robust build quality and the Input/output (I/O) flexibility required of the perfect IoT gateway solution. Business deploying the EL-20 series IoT gateways can quickly establish and future-proof their environments. By using it as a solution to bridge unconnected legacy system, aggregate data output or establish secure data flow between edge devices and the cloud.

SMART AND CONNECTED THINGS
Sense, filter, process, analyze, and actuate, while securing and managing machines and data.

DEVELOPER KITS, TOOLS & SDKs
Rapidly move to prototyping, piloting, and productizing with developer kits, tools, and SDKs.

UNLOCKING THE VALUE OF DATA
Process, store, and analyze data globally, perform complex analytics on large datasets, secure and manage millions of endpoints, and manage policies, metadata, and networks.

VISUALIZE DATA AND MONETIZE INSIGHT
Provide actionable information and create new services, while automating operations.

THINGS

CLOUD MANAGEMENT

DATA CENTER & STORAGE

APIs AND THIRD-PARTY CLOUD CONNECTIONS

GIGABYTE EL-20

CONNECTING THE UNCONNECTED
Capture, filter, process, and store data, connect securely to legacy infrastructure, and perform analytics at the edge.

END-TO-END SECURITY
Secure hardware, software, and data, as well as device and policy management. Detect threats and safeguard scalable compute.

DATA AND DEVICE MANAGEMENT
Supports onboarding, monitoring, diagnostics, and remote control of devices.

intel® | IoT Solutions Alliance

Specification

Dimension	140.8W x 107.5D x 27H mm
CPU	Intel® Pentium® N3710 processor 14nm, 4 cores, 4 threads 1.6 - 2.56 GHz 2MB L2 cache 6W max. TDP
Socket	1 x BGA 1170
Memory	2 x SO-DIMM slots 1.35V DDR3L memory Up to 8GB 1333/1600MHz
Flash Memory	32GB eMMC
LAN	2 x GbE LAN Ports (Realtek® RTL8111HS)
Graphic Support	Intel HD Graphics supports dual display Max. resolution via HDMI ports: 3840x2160 @30Hz or 2560x1600 @60Hz with 2 memory installed Max. resolution via eDP: 2560x1440 @60Hz with 2 memory installed

Audio	Realtek® Audio Codec
Storage	1 x SDXC card slot
Expansion Slots	1 x Full-size Mini-PCIe slot (for 3G module or mSATA storage) 1 x Half-size Mini-PCIe slot (for pre-installed WiFi+BT module) 3G module in option Pre-installed: - 1 x WiFi + Bluetooth card - Intel Dual Band Wireless-AC 3160 - Supports IEEE 802.11b/g/n/ac - Supports Bluetooth 4.0 - Bluetooth function does not support under Windows 7 embedded OS
Front I/O	4 x USB 3.2 Gen 1 1 x SDXC card slot 1 x Headphone-out / MIC-in 1 x Power button with LED 1 x HDD activity LED 3 x LEDs reserved for user configuration
Rear I/O	1 x DC-in 2 x HDMI v1.4b 2 x RJ45 LAN Ports
Side I/O	1 x Micro-B USB 2.0 1 x Micro-B 5-pin *RS232 full-duplex port (TxD, RxD, CTS, RTS, GND) *[NOTE]: 1. Please check the pin definition and ensure the port is suitable for your peripherals. 2. The serial driver GIGABYTE provided for Windows 10 and 8 is a trial version, please contact your peripheral vendor to get the correct driver.
TPM	1 x TPM header
Power	AC 100~240V 19V DC-in 65W/3.42A
OS Compatibility	Windows 10 64bit Windows 8.1 64bit Windows 7 32bit / 64bit Ubuntu 15.10 Ubuntu 16.04 LTS Android 5.1 - Please download the "Windows USB Installation Tool" from GIGABYTE's website and install it before installing Windows 7
Operation Temperature	Operating temperature: 0°C to 40°C Operating humidity: 0%-90% (non-condensing) Non-operating temperature: -20°C to 60°C Non-operating humidity: 0%-95% (non-condensing)
Weight	560g
Packaging Content	1 x Quick start guide 1 x EL-20-3700 1 x Intel Dual Band Wireless-AC 3160 card 1 x 19V AC/DC power adapter 2 x WiFi antennas

	1 x 3G antenna
System Fans	Fanless
Motherboard	MZBSWFP
Order Information	6BTCV5WMR-00