SKYLAB

Advanced IoT Gateway

Advanced Data Logistics For The IoT Revolution

IGX Series: A new breed of IoT gateway with a modular design for both physical device connectivity and network backhaul capabilities. Powered by an advanced multi-protocol aware middleware allowing you to interface with any kind of IoT data source and destination. This allows IGX to scale efficiently and rapidly to support billions of devices while keeping costs low

Multi-protocol support

IGX can gather your IoT data and transmit it safely and securely to the destination through it's embedded middleware, providing guaranteed technology integration regardless of the IoT platform or machine protocol used.

Wireless Backhaul

With in-built hardware support for various types of wireless backhaul technologies (Cellular LTE and CAT-M1, Fiber, Copper, Satellite)

Edge Computing

IGX allows you to run containerised applications on the device for advanced edge computing capabilities. Combined with DLC Marketplace for remote management and application deployment

- **IGX-Docker:** For smaller scale applications, IGX is embedded with docker for container management and deployment
- **IGX-Kubernetes:** For larger scale applications, MEC class IGX devices run kubernetes for scalability and performance
- **DLC Marketplace:** Upload, deploy and manage your edge computing applications with DLC

Use Case Scenario

DATA SOURCE — IGX — DATA LINKS

Things — Middleware — Internet
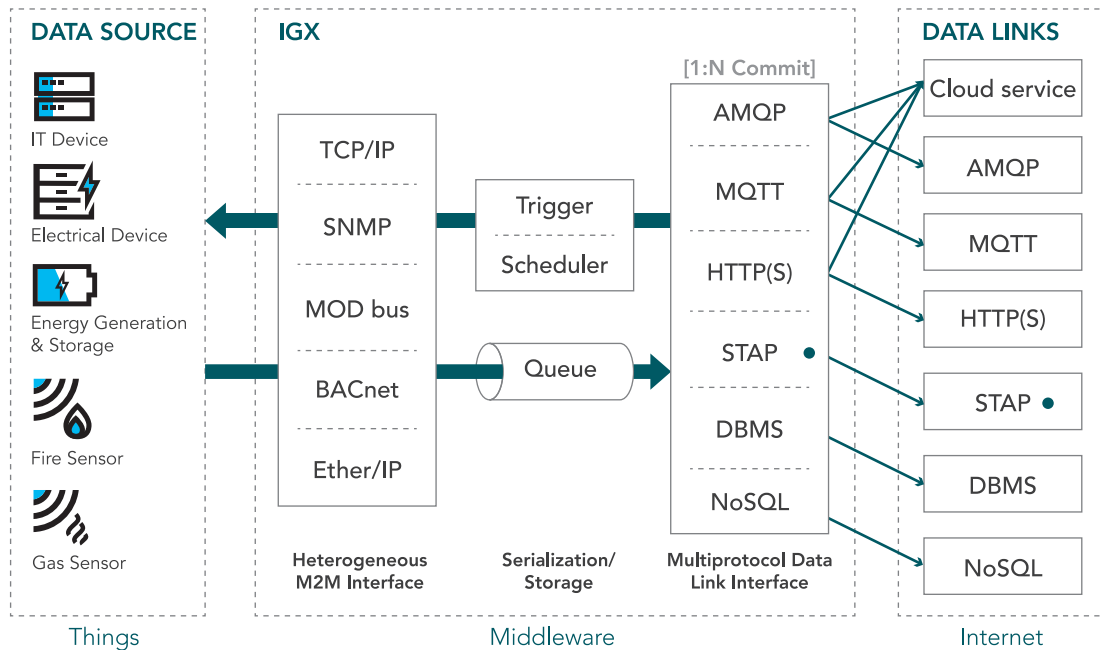
Key Benefits

🔒 SECURITY

Master IGX Device Registration with Administrator Authorization using DLC. Automated Device Certificate Exchange using X509, Sub-Device Authorization - PLC, Sensor, Meter & Inverter. Data Protection includes remote lock, deactivation & block level encryption. DLC provides secure data transmissions (TLS). User Permissions & Device Auditing using DLC Platform.

⚙ MANAGEABILITY

Centralized Remote Management using DLC offers remote manageability of IGX devices (and sub-devices) & enhances system reliability. From DLC, you can remotely monitor, configure and update single devices or groups of devices. This secure portal allows you to rapidly deploy & manage a large number of remote locations

⧉ CONNECTIVITY

Heterogeneous machine and data protocol support for diversity in field communication. WiFi/Cellular/Bluetooth ensure interoperability between systems. Flexible expansion modules are available to support scalability.

📊 SCALABILITY

Utilizing cutting edge Enterprise level private cloud technologies allows IGX to be agile, scale efficiently & rapidly to support billions of devices while keeping costs low.

📲 INTEGRATION

A full suite of APIs are also available to support Configuration Management, Device Status Management, ID Management and Device Authentication.

Model Specifications

with **STA™**

|			IGX-RX-1100	IGX-RX-1100-PLUS	IGX-FN-2500
HARDWARE	**System**	CPU / Core	NXP iMX7D Arm® Cortex®-A7	NXP iMX7D Arm® Cortex®-A7	Intel® Atom™ E3826 Dual Core, 1.46GHz
		Memory	1GB	1GB	4GB
		Storage	8GB EMMC	8GB EMMC	16GB EMMC
	Networking	RJ45 Ports	2	2	2
		RJ45 By-pass ports	2	2	No
		WiFi	No	No	Optional
		BLE	Yes	Yes	Optional
		LTE 4G	No	No	Optional
		CAT M1 / NBIoT	Yes	Yes	Optional
	I/O Interface	Display Output	No	No	HDMI
		Console	UART	UART	Yes
		USB	1x USB Micro 2.0 OTG	1x USB Micro 2.0 OTG	4x USB 2.0
		RS - 232/485/422	2x RS-232 /485	2x RS-232 /485	2x RS-232 3x RS-422/485
		GPIO	1x GPIO (4 PIN)	1x GPIO (4 PIN)	1x GPIO (4 PIN)
		Audio	No	No	Yes
	Security	TPM Chip	No	No	Optional
		Watchdog Timer	Yes	Yes	Yes
	Power	Input	12V DC / 2.5A	12V DC / 2.5A	24V DC +/-20%
	Environmental Parameters	Operating Humidity (RH)	5% ~ 95% @ 50°C (non-condensing)	5% ~ 95% @ 50°C (non-condensing)	10% ~ 95% (non-condensing)
		Operating temperature	0°C to 50°C	0°C to 50°C	-5°C to 55°C
	Compliance	Certification	CE	CE	CE/ FCC Class A/ UL/cUL
	Form factor	Type	Fanless with metal casing	Fanless with metal casing	Fanless with metal casing
		Dimensions (W x H x D)	70mm x 100mm x 52mm	70mm x 100mm x 52mm	162mm x 150mm x 50mm
SOFTWARE	**OS**	OS	SkyLab IGX OS	SkyLab IGX OS	SkyLab IGX OS
		Container Technology	IGX-Docker	IGX-Docker	IGX-Docker
	Data Acceleration	With STAP	No	Yes	No

IoT is revolutionizing and changing the way we make decisions both at the macro and at the micro level every minute of our day. From building smart homes to smart and green cities IoT solutions need a robust and always available Infrastructure. SkyLab has designed a upstream to downstream data integration and technology solution - Data Logistic Cloud (DLC) that can drive synergies and network effects through improved Security, Latency and Scalability across multi-generations of control systems over a large scale network.

STA accelerates traffic by analysing traffic & routing conditions in real time to find the fastest route between the data source and the destination even on 2G/3G/4G, satellite and many types of IoT radio networks. STA reduces network latency , increases throughput, optimizes transport layer performance and reduce overall network congestion problem.

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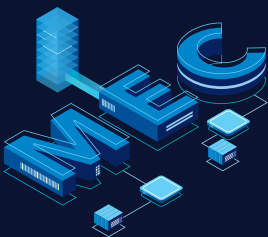
SkyLab's Multi-access Edge Computing, or MECs, are designed to be deployed at the edge along with your other devices and systems, either as a physical or virtual appliance. With additional computing, storage and processing power, using the latest in containerisation technology to ensure operability for whichever application you choose to run and however you choose to develop it. Running your applications at the edge means you can offload processing, network usage and time from the cloud, complimenting your existing infrastructure.