

OPPORTUNITY GUIDE:

Internet of Things



Internet of Things



Value



Growth

Overview

The analysts at IDC believe the Internet of Things (IoT) will encompass nearly **30 billion connected devices** by 2020¹ –that's **4X the global population**.

All those devices will create an unprecedented amount of data—data that needs to be captured, transmitted, stored, backed up, analyzed and delivered.

As enterprises prepare for this tidal wave of IoT data coming their way, it's opening up opportunities for value-added resellers (VARs) in several specific areas and in several early-adopting industries.

Market Drivers

- **Ubiquitous High-Speed Wireless** – The ubiquity of high-speed wireless Internet connectivity allows for nearly universal placement and use of connected devices.
- **Dropping Prices** – The price of sensors and other components that are used to manufacture IoT devices continue to drop, making added connectivity more affordable.
- **Significant Investment** – Manufacturers and venture capital firms see IoT as the “next big thing” in technology, investing billions in an effort to gain market leadership. IBM alone publicly committed \$3 billion to IoT in spring 2015.
- **Massive Promise** – In the eyes of economists, IoT has the potential to be as pervasive in society as the Mobile Revolution and the Internet Revolution before it. McKinsey & Co. predicts IoT will create \$11 trillion in economic impact by 2025.

Market Opportunity

- Gartner predicts that 5.5 million IoT devices will be connected every day in 2016.²
- Gartner also predicts the use of connected things in the enterprise will drive \$868 billion in spending in 2016.²
- According to the analysts at IDC, the IoT will fuel a 17.0% CAGR in spending, from \$591.7 billion in 2014 to \$1.3 trillion in 2019.¹

INTERNET OF THINGS DELIVERS:

End Users

An interconnected world that constantly puts useful information at your fingertips.

IT Administrators

Autonomous systems that reduce the need for monitoring support.

IT Directors & Managers

Intelligent networks that can reduce downtime and provide greater visibility.

CIOs

More robust reporting, stronger data analytics, deeper and broader visibility and accountability.

Why the Internet of Things?

- Be a part of a generational opportunity that will impact every aspect of society in the next decade.
- IoT will create an exponential increase in data that will impact every aspect of your customers' IT infrastructure.
- The massive spike in connected devices will create unprecedented demand for management and security support.
- Lack of standards and proliferation of devices creates confusion and complexity that can overwhelm already-stressed IT teams.

¹ IDC, Worldwide Internet of Things Forecast Update 2015-2019, Doc # US40983216, Feb 2016

² "Gartner Says 6.4 Billion Connected 'Things' Will Be in Use in 2016, Up 30 Percent from 2015," Gartner, Nov 2015

Challenges

Platform Proliferation

Due to a lack of standards, IoT device manufacturers and software vendors are developing proprietary device management and data capture platforms, greatly increasing complexity.

Exponential Data Growth

IoT devices continuously stream data, creating a torrential flood of information far beyond what most data centers are equipped to handle.

Data Islands

Proprietary IoT platforms are initially disconnected from other systems. These data islands need to be integrated with existing infrastructure and analytics capabilities in order to deliver business value.

Edge-to-Edge Integration

In order to deliver the status updates, service alerts and other benefits of intelligent devices, they require deep, seamless network integration from the device to the data center, then back out to user PCs and mobile devices where the updates and reports will be delivered.

Network Security

Every device with an operating system and a connection to the Internet is a new target for hackers and a potential entry point to the secure network.

Why Avnet

From the edge to the enterprise, Avnet accelerates your success through a comprehensive ecosystem of hardware, software, services and solutions.

Avnet provides customers with a wide range of resources to develop IoT solutions that effectively gather information, connect to the Internet, and securely manage and analyze data.

Long-standing manufacturer relationships, a comprehensive product portfolio, world-class services capabilities, global scale and financial stability make Avnet a reliable and proven partner for your IoT initiatives.

To learn how to align your business to take full advantage of this generational opportunity, contact your Avnet representative or visit the [Avnet Knowledge Network](#).

Solutions



Cloud and Data Center Automation

Data center leaders like IBM and cloud vendors like Amazon are racing to roll out platforms designed to capture and integrate data streams from thousands of connected devices simultaneously.

Whether these platforms are hosted in the cloud or on premises, they need to be tightly integrated with the existing data center environment. This creates a wealth of opportunity for VARs to deliver consulting and integration services to help bridge the gap.



Converged Infrastructure

IoT is expected to generate an unprecedented volume—and velocity—of data that will certainly overwhelm legacy data center architectures.

Converged infrastructure solutions that tightly integrate computing, storage and networking cores into a single appliance can deliver the rapid scalability and next-generation speed and throughput data centers need to thrive in the IoT age.



Data Analytics

The true business value of IoT doesn't come from the massive influx of raw data: the value is only unlocked once that data has been converted to actionable, timely information.

If this data analytics capability is delivered through an external IoT platform, it still needs to be tightly integrated with the data center environment. If the enterprise wants to bring this capability in house, it requires a significant investment that creates a transformational opportunity for the VAR.



Mobility

Once the data has been analyzed and converted into information, it needs to be delivered to the business users when and where they want it. More often than not today, that information is being delivered to a mobile device.

The mobile delivery opportunities go beyond static reports to business leaders to include alerts and warnings sent to operators and service technicians, real-time status checks for regional managers and much more.

As the number of mobile devices increases and the Bring Your Own Device movement spreads, enterprises will need assistance deploying, managing and securing the breadth of devices along with the apps and data they contain.



Security

Enterprise data has tremendous value to malicious hackers, identity thieves and cyberespionage actors alike. With the number of connected devices increasing exponentially due to the Internet of Things, so too will the number of potential vulnerabilities that can be exploited.

Enterprises will need expert assistance from VARs to secure not only the IoT devices themselves, but the entire chain of delivery, stretching from the device to the data center and back out to the mobile phones and tablets on the network's edge.