Fieldcomm Group IP Patent Portfolio List

Owned, Licensed, Donated, and under Agreement
in force or pending as of July 15, 2019

A. Block

1. US 6,826,590 Block-Oriented Control System on High Speed Ethernet

2. US 8,539,110 Block-Orientated Control System having Wireless Gateway for Communication with Wireless Field Devices
   - HK 1143470

3. (US Patent Expired) Flexible Function Blocks
   - CN 102323785B
   - EP 1629332A1
   - HK 1087795

B. HART

1. US 6,297,691 Method and Apparatus for Demodulating Coherent and Non-Coherent Modulated Signals

C. Alerts

1. US 6,975,219 Enhanced HART Device Alerts in a Process Control System

2. US 7,557,702 Integrated Alert Generation in a Process Plant

3. US 7,562,135 Enhanced Fieldbus Device Alerts in a Process Control System

4. US 8,044,793 Integrated Device Alerts in a Process Control System

D. Wireless HART

1. US 8,169,974 Suspending Transmissions in a Wireless Network
   - CN 101682542B
   - DE 602008028453.0

2. US 8,230,108 Routing Packets on a Network using Directed Graphs
   - CN 101682541B
   - DE 602008041694.1

3. US 8,325,627 Adaptive Scheduling in a Wireless Network

    - CN 101682535B
    - DE 602008059232.4

4. US 8,356,431 Scheduling Communication Frames in a Wireless Network

    - CN 101919208B
    - DE 602008055609.3

5. US 8,406,248 Priority-Based Scheduling and Routing in a Wireless Network

    - CN 101682537B
    - DE 602008052996.7

6. US 8,441,947 Simultaneous Data Packet Processing

7. US 8,451,809 Wireless Gateway in a Process Control Environment Supporting a Wireless Communication Protocol

    - CN 101682587B
    - DE 602008021420.6
    - DE 602008032363.3

8. US 8,570,922 Efficient Addressing in Wireless HART Protocol

    - CN 101682547B

9. US 8,660,108 Synchronizing Timeslots in a Wireless Communication Protocol

    - CN 101690010B
    - DE 602008044417.1

10. US 8,670,746 Enhancing Security in a Wireless Network

    - CN 101682536B
    - DE 602008056807.5

11. US 8,670,749 Enhancing Security in a Wireless Network

    - CN 103561403B

12. US 8,676,219 Combined Wired and Wireless Communications with Field Devices in a Process Control Environment
    - CN 101682546B
    - DE 602008055552.6

13. US 8,798,084 Increasing Reliability and Reducing Latency in a Wireless Network

    - CN 101690011B
    - DE 602008041028.5

14. US 8,892,769 Routing Packets on a Network using Directed Graphs

15. US 8,942,219 Support for Network management and Device Communications in a Wireless Network

    - CN 101868943B
    - DE 602008020836.2

E. Emergency Shut Down

1. (US Expired) Emergency Shutdown Test System

    - BRPI0008723B1
    - CA2372138C
    - CN1120318C
    - JP04475822B2
    - MX230802B

F. Abnormal Situation Presentation

1. US 7,389,204 Data Presentation System for Abnormal Situation Prevention in a Process Plant

    - CN 1926489B
    - IN 312405B

2. US 7,957,936 Presentation System for Abnormal Situation Prevention in a Process Plant

    - CN 102520717B

G. Non-Periodic Control Communications

1. US 7,587,252 Non-Periodic Control Communications in Wireless and Other Process Control Systems

2. US 7,620,460 Process Control with Unreliable Communications

3. US 7,945,339 Non-Periodic Control Communications in Wireless and Other Process Control Systems

4. US 8,719,327 Wireless Communication of Process Measurements

Related foreign applications to above four US patents:

- CN101382797B
- CN101963809B
- CN102081397B
- CN1955867B
- CN1967418B
- GB2431736B
- GB2431752B
- GB2452617B
- GB2475629B
- JP05207614B2
- JP05230922B2
- JP06259706B2
- JP 2016129063A (pending)
- JP 2018088276A (pending)

H. Two-Wire Field Device

1. US 6,574,515 Two-Wire Field-Mounted Process Device (selected claims)

- BRPI0110762B1
- CN 1217247C
- CN 100381958C
- EP 2251754A1
- IN 206937B
- SG 115873B
- SG 128486B

2. US 6,711,446 Two-Wire Field Mounted Process Device (selected claims)

3. US 7,262,693 Process Field Device with Radio Frequency Communication

- AU2005280612C1
- CA2568986C
- CN1969238B
- CN102629123B
- EP2985665A2
- IN261084B
- JP04762235B2
- MX264097B
- SG128018B

J. Field Device-Specific Functionalities/Data Download

1.	US 8,000,815 (selected claims)	Method for the Supplying and Installation of Device-Specific Functionalities and/or Data for the Field Devices of a Distributed System